

ENVIRONMENT AND HEALTH MANAGEMENT DIVISION

July 20, 1984

EXPRESS MAIL

RETURN RECEIPT REQUESTED

Mr. Kent Breese
Uranium Licensing Section
Radiation Protection Bureau
Environmental Improvement Division
State of New Mexico
P.O. Box 968
Santa Fe, New Mexico 87504-0968

#### Dear Mr. Breese:

On November 24, 1980, Radioactive Material License SUA-616 was amended to authorize operation of an ion exchange plant located at Quivira Mining Company's Church Rock I Mine. Construction of the ion exchange plant as described in the license amendment application was postponed because of the lack of economic or environmental justification.

A recent increase in the uranium content of the mine discharge water above the 2 mg/l NPDES limitation has prompted a search for a method of reducing uranium in the NPDES outfall to permit compliance as quickly and economically as possible. The results of mine water sampling (see Attachment 1) show that approximately 39 percent of the uranium in the total flow of mine water is coming from a single haulage drift with only 2 percent of the total flow.

Quivira Mining Company plans to process this small stream (40-50 gpm) through an underground ion exchange system to recover the uranium and lower the total mine water uranium content by about 0.7 ppm U.

This letter with attachments provides the information required for modification of the November 24, 1980 amendment so that we may proceed with plans to reduce the uranium content of the NPDES outfall. Included in the attachments is information answering the questions presented by you in a telephone conversation with Jim Marler on July 13, 1984. If you need additional information, please call Mr. Marler at (405) 270-2637. Your expeditious review of this information is appreciated.

Sincerely

J.C. Stauter, Director

Nuclear Licensing & Regulation

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QUIVIRA MINING COMPANY

INTERMEDIATE STANDBY PLAN

QUIVIRA MINE - CHURCHROCK, NEW MEXICO

LEASES 9987, 9988, and 9990

### INTRODUCTION

If the above leases are maintained in a standby mode that keeps the uranium reserves available for future extraction, an arrangement must be worked out to keep the physical plant intact while minimizing the impact on the environment. Conventional mining, old stope leaching, in-situ leaching, or some other form of extraction will require that the facilities presently available at the mine site be kept ready for the process and to gain access to the mine workings. The standby mode would permit the later recovery of the mineral values at a time when economic conditions support resumption of operations.

# STANDBY MODE

Quivira Mining Company will take the following actions to maintain the leases in a condition that would allow resumption of operations:

- 1. Underground equipment will be removed from the mine and stored. Pumping equipment will be removed, and the active mine workings will be allowed to flood.
- 2. Production shafts and ventilation boreholes will be sealed by welding steel plates across surface openings.
- 3. Buildings, headframes, hoists, compressors, and other permanent equipment will be protected by means which provide for long term storage. A program will be established to maintain the plant in a good state of repair.
- 4. Fences will be upgraded where needed to prevent entry by domestic livestock, and areas posted with warning signs as appropriate.
- 5. Ponds and other water treatment facilities will be emptied and stabilized for future use.
- 6. Berms will be maintained as required to divert natural runoff away from materials in one storage areas and low grade waste site s. Runoff from the mine site will be contained.
- 7. 24-hour security will be provided at the Church lock I mine site. Regular patrols of all areas will be conducted.

# ENVIRONMENTAL MONITORING PROGRAM

- 1. Present groundwater monitoring programs will continue,
- 2. Water levels in the Westwater formation (mining horizon) will be monitored for quality and quantity through the mine production shaft and a selected vent borehole.
- 3. A radon monitoring station will be established at the mime site, using an automatic sampler.
- 4. Vegetation and soil samples will be taken semi-annually.
- 5. A high volume sampler will be utilized to determine particulate concentrations of uranium, chain radionuclides.
- 6. Surface waters (when present) will be sampled quarterly. There will be no discharge from the permitted NPDES outfall.

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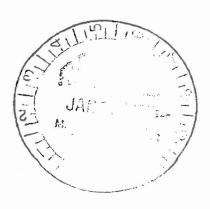
## ABANDONMENT AND RECLAMATION PLAN

Church Rock I, IE and II Mines Navajo Nation Lease 14-20-20603-9988

> Quivira Mining Company Church Rock, New Mexico



January, 1987



ABANDONMENT AND RECLAMATION PLAN
Church Rock I, IE and II Mines
Navajo Nation Lease 14-20-20603-9988
Quivira Mining Company
Church Rock, New Mexico

#### 1.0 INTRODUCTION

Upon termination of the uranium mining leases with the Navajo Nation and abandonment of the Church Rock I, IE and II mines, Quivira Mining Company will reclaim and stabilize the mine sites in accordance with this plan. The plan complies with the original lease terms and requirements contained in Quivira's mining plan approved by the USGS which was succeeded by U.S. BLM.

The mines were placed in a "standby mode" on January 31, 1985 and the following steps have been taken:

- All mining, electrical and haulage equipment were removed from the mine and stored at surface facilities.
- 2. At the request of the Bureau of Land Management (BLM), fire doors in the station areas were welded shut and reinforced with steel beams. Underground openings to ventilation bore holes were closed with chain link fencing or ventilation control doors.

# SEQUOYAH FUELS CORPORATION

POST OFFICE BOX 25861 . OKLAHOMA CITY OKLAHOMA 73125

May 11, 1987

Mr. Akhtar Zaman Director Minerals Department The Navajo Nation P. O. Box 146 Window Rock, Arizona 85515



Dear Mr. Zaman:

As per our telephone conversation on May 7, 1987, please find enclosed three (3) copies of recent correspondence sent to the BIA, BLM and The Navajo Nation which replies to BIA letter of February 25, 1987 by surrendering Lease Nos. 14-20-0603-9987, 9988 and 9990 held by Quivira Mining Company and the "Abandonment and Reclamation Plan" for the Church Rock I, I-E and II Mines. Please distribute one copy each to the Director - Environmental Quality Department, Director - Water Management Department, and keep one for the Minerals Department.

QMC is presently removing equipment from the surface ventilation hole locations and cleaning the sites. Draining of the surface settling ponds has begun in preparation for slime removal. Near term schedules include dismantling buildings and headframes and commencement of backfilling the shafts and ventilation holes. If The Navajo Nation wants any of the above mentioned facilities preserved, including access to mine water, please notify me by June 15, 1987.

I appreciate your interest and help in expediting this matter. Our technical staff is available to meet with appropriate personnel from The Navajo Nation, BIA and BLM to discuss the reclamation plan.

Sincerely,

H. E. Whitacre, Director

Mining & Milling

HEW/jlm Enclosures Mr. Akhtar Zama May 11, 1987 Page 2

#### cc: w/o enclosures

The Navajo Nation
Window Rock, Navajo Nation
Arizona 86515
ATTN: Mr. Charles Damon
Division of Resources
Navajo Nation

United States Department of the Interior Bureau of Land Management
435 Montano Road, N.E.
Albuquerque, N.M. 87107
ATTN: Rio Puerco Resources Area
Manager

United States Department of the Interior Bureau of Indian Affairs
Navajo Area Office
P. O. Box M
Window Rock, Arizona 86515-0714

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POST OFFICE BOX 25861 . ORLAHOMA CITY OKLAHOMA 73125

June 12, 1987

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Mr. John Andrews Bureau of Land Management 435 Montano Road N.E. Albuquerque, New Mexico 87107

Dear Mr. Andrews:

Quivira Mining Company ("QMC") agreed to notify the BLM before any of the immobile mining equipment is removed from the Church Rock I and IE Mines. This note confirms our telephone conversation on June 8, 1987 during which you were advised that QMC is actively pursuing inquiries concerning the disposition of the headframes and hoists at both mining facilities.

As you suggested, I informed Akhtar Zaman, Director Minerals Department, The Navajo Nation, of the pending removal of this equipment. I also told him that BLM did not object to this action. Mr. Zaman said that he would notify the responsible personnel in The Navajo Nation.

You indicated that the BLM has asked for comments from The Navajo Nation and BIA concerning the QMC reclamation plan by June 30, 1987. It should be noted that in order for QMC to maintain a reclamation schedule with the present manpower, backfilling of the shafts and ventilation holes and dismantling of buildings must begin in the near future. In my letter to Mr. Zaman on May 11, 1987 The Navajo Nation was asked to respond to the above activity by June 15, 1987.

Our technical staff is available to meet with the appropriate personnel from The Navajo Nation, BIA and BLM to discuss the reclamation plan. I appreciate your help in expediting approval of the reclamation plan.

JUN 1 5 1987

BR. OF MANY CONT. SGMY.

Sincerely,

H. E. Whitacre, Director

Mining & Milling

HEW:kfm

# QUIVIRA MINING COMPANY

POST OFFICE BOX 29061 + DILAHOMA CITY OKLAHOMA 73125

August 21, 1987

The Navajo Nation Window Rock, Navajo Nation Arizona 86515 ATTN: Mr. Charles Damon

Division of Resources

Navajo Nation

United States Department of the Interior Bureau of Land Management 435 Montano Road, N.E. Albuquerque, New Mexico 87107

ATTN: Mr. John Andrews

Gentlemen:

During April, 1987, Quivira Mining Company (QMC) surrendered Navajo Reservation Leases Nos. 14-20-0603-9987, 9988, and 9990 pursuant to 25 CFR 211.27(b) and submitted an Abandonment and Reclamation Plan for review and approval. To date, there has been no response from the Navajo Nation, BIA or BLM regarding approval of this plan.

In our letter dated May 11, 1987, QMC requested information to be received by June 15, 1987, regarding the intention of the Navajo Nation with respect to preserving the Church Rock I and I-E mine buildings and access to the mine water through ventilation holes and shafts. Again, there has been no response to QMC's request or acknowledgement that the request was made.

Quivira Mining Company continues to perform work on the Church Rock I and I-E mine sites as presented in the Reclamation Plan. The surface ventilation equipment has been removed and the sites cleaned in preparation for final reclamation. Surface settling ponds have been drained and sludge removal begun. The headframes and hoists are being dismantled and removed from the mine sites (permission to remove this equipment was granted by the Navajo Nation and BLM). The work, as outlined in the Reclamation Plan, will be interrupted unless a prompt decision is reached by the Navajo Nation concerning disposition of the mine buildings and access to the mine water.

In order to maintain the present level of reclamation activity, QMC requests that the Navajo Nation express their intentions by October 1, 1987, regarding the mine buildings and access to mine waters through ventilation holes and

August 21, 1987 Page 2

shafts. If there is no response to this request, QMC will assume that the Navajo Nation does not wish to preserve either the mine buildings or access to the mine water. The Reclamation Plan will be followed with commencement of shaft and ventilation hole backfilling and removal of the mine buildings.

Our technical staff is available to meet with appropriate personnel from the Navajo Nation, BIA and BLM to discuss the Reclamation Plan.

Sincerely,

H. E. Whitacre, Director Mining & Milling Operations

### HEW/Jlm

cc: The Navajo Nation

P. O. Box 146

Window Rock, Arizona 86515 ATTN: Mr. Akhtar Zamon

Director, Minerals Dept.

Name de Bladde

Navajo Nation

The Navajo Nation

Window Rock, Navajo Nation

Arizona 86515

ATTN: Director - Water Management

Navajo Nation

The Navajo Nation

Window Rock, Navajo Nation

Arizona 86515

ATTN: Director - Environmental Quality Dept.

Navajo Nation

United States Department of Interior Bureau of Indian Affairs Navajo Area Office P. O. Box M Window Rock, Arizona 86515-0714 ATTN: Area Director